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cleared without very considerable development. It is probable that not more than about 50 per cent. of the above capacity could be worked. Grain is loaded by land and floating elevators.

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The ports of Brăila and Galaţi are ice-bound during some winters, ice occurring to a sufficient extent to prevent navigation from the Black Sea between January and mid-March in about 3 years in 10.

D. INLAND WATERWAYS

I. General

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In 1937 navigable waterways totalled 2,840 km (1,766 miles) and were divided as follows :—

	Km.	*Miles*
Danube	1,075	668
Danube tributaries	395	246
Dniester	740	460
Prut	410	255
Mureş	185	115
Bega Canal	35	22

The rivers Dniester, Prut and Mureş have not been adequately regulated for regular traffic, but are used for local traffic and for timber floating.

II. The Danube

1. Traffic

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The Danube, Rumania's main traffic artery, carried about 60 per cent. of all import tonnage and some 15 per cent. of all exports in the years immediately before the war. Traffic is of two distinct types; first, the traffic in sea-going vessels with an average size of 2,000-2,500 tons proceeding as far as Galaţi and Brăila via the Sulina mouth, and second, on the river proper, on the Danube above Galaţi.

The sea-going traffic passing through the Sulina mouth in the years just before the war consisted of about 1·2—1·4 million tons a year of exports from Rumania or other riparian states. By far the most important items were grain and timber. About half the vessels entering the Danube from the sea appear to have been in ballast, the remainder bringing in some 300,000-500,000 tons of imports mainly for Rumania.

Inland-water traffic on the Rumanian sector of the Danube in 1938 (the latest year for which information for all kinds of traffic is available) amounted to 3 million tons. 1·6 million tons consisted of upstream traffic from Rumania to other riparian states, 0·24 million tons of downstream traffic to Rumania, about 1 million tons of Rumanian internal traffic, and about 0·2 million

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of transit traffic (mainly downstream). Traffic with other riparian states was apportioned as follows:—

	From Rumania	*To Rumania*
	'000 tons	
Germany	220	40
Austria	390	20
Czechoslovakia	440	30
Hungary	300	150
Yugoslavia	200	—
Bulgaria	80	3
	1,630	243

The composition of inland-water traffic has been fully analysed only at the Iron Gates, at the western end of the Danube's Rumanian course. In the traffic shown below, the upstream traffic consisted mainly of Rumanian exports, while the downstream traffic was made up of imports and transit traffic in approximately equal proportions.

Traffic in '000 metric tons at the Iron Gates:—

	1938	1939
	Upstream	
Total	1,362·5	1,864·0
of which (main items only):		
Timber	20·1	11·9
Iron	21·1	13·4
Wheat	30·3	300·6
Barley	49·8	68·0
Maize	25·1	125·3
Petroleum and its products	787·7	1,046·1
Salt	30·8	31·7
	Downstream	
Total	489·3	771·2
of which (main items only):		
Iron	77·2	22·2
Timber	67·6	86·5
Wheat	74·4	363·0
Maize and oats	79·6	28·2

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Little is known about traffic since Rumania finally joined the Axis in 1941. As a whole, it is below pre-war level as a result of a great decrease in the amount of grain coming forward. This has been partly, but certainly not entirely, counterbalanced by a slight increase in oil traffic, by the probable diversion of rail traffic to the Danube and by military traffic. The most important individual traffics at the present time are as follows:—

(*a*) Oil shipments from Giurgiu (i) upstream to Italy (50-70,000 tons a month), to Germany (possibly 30-50,000 tons a month), and (ii) downstream to German forces in South Russia (quantity unknown, but may be substantial).

(*b*) Downstream supplies of (i) coal to Rumanian railways (part only of total supply), and of (ii) military equipment, stores, etc., to South Russia (quantities unknown).

(*c*) Upstream supplies of (i) some S. Russian products, including grain (perhaps 20,000 tons a month) and possibly iron and manganese ore (quantities unknown), as well as of (ii) some small quantities of Rumanian exports of agricultural products.

2. Navigation

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The Iron Gate Sector of the Danube between Orşova and Turnu Severin, with its rapids and reefs causing violent currents, is particularly difficult for navigation, and the use of specially

133 trained pilots is compulsory, while the barge tows
●502 have to be broken up into smaller units. This sector of the Danube cannot be negotiated at night, which constitutes an enormous hindrance for large-scale traffic. In order to speed up the traffic, the use of suspension railways and locomotives on rails laid along the river bank was introduced before the war, but the system has met with only moderate success.

[503] Navigation in the Maritime sector of the Danube is affected by silting up—particularly in the autumn—and constant dredging has to be carried out in the Sulina branch to maintain sufficient depth for passage of vessels up to Galaţi. The depth of this sector was 24 ft. in 1939, permitting the entry of vessels of medium draught only. Danube navigation is held up for varying periods between November and March by ice, averaging 30-50 days, and occasionally even for 90 days.

499 There are no permanent bridges on the Danube to connect Rumania with Bulgaria. However, a Rumanian-Bulgarian Commission was established in 1942 to remedy this deficiency by arranging for the construction of a bridge, which will take five years to complete, between Giurgiu and Ruse. In the meantime a ferry system is in use between Giurgiu and Ruse carrying important supplies of oil for the German forces in Greece.

3. River Ports

503 There are in all some 38 river ports, of which the
504 most important, all on the Danube (from west to east), are as follows :—

Moldova	Oltenița
Orșova	Brăila
Turnu Severin	Galați
Giurgiu	Sulina

Since the war started considerable improvements have already been made on the Danube. This is of special significance for, though this waterway is of little use for Rumanian internal traffic, since the closing of the sea route between Rumania and North Germany, it has become vitally important for the carrying of bulky transport. As early as 1940 a scheme for the rationisation of Danube traffic was put into operation, and the installations of Giurgiu, the main Danube port for oil transport, were improved.

To avoid congestion at Giurgiu, the Danube ports of New Moldova and Orșova have been enlarged. Internal traffic has been diverted to Oltenița, which is also used for the unloading of incoming traffic. The construction of new harbour installations is being carried out by a German-Rumania company.

4. Organisation of Inland Water Shipping

505 Rumanian Danube shipping is under State
654 control, and organisation is carried out by firms which are partly State-owned and partly owned by private individuals. The most important company is the State-owned "N.F.R." (*Navigațiunea Fluvială Română*), and of lesser importance are the privately owned companies "S.R.D." (*S.A.R. de Navigație pe Dunăre*) and "Sind" (*Societa Italiana di Navigazione Danubiana*).
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505 All Rumanian shipping companies are members
648 of the Danube Shipping Pool, which is under German supervision, headed by the *Deutsche Donauschiffahrtsgruppe*, which is closely connected with the Hermann Goering-Werke für Binnenschiffahrt. The importance of the Danube Pool (exclusive of the Tanker Pool) will be realised when it is borne in mind that between 1932-1937 the freight carried annually by its vessels on the